

NAPA RIVER SALT MARSH AND NAPA PLANT SITE RESTORATION PROJECTS BIENNIAL REPORT PRELIMINARY SUMMARY



Karen Taylor, Environmental Scientist
Napa-Sonoma Marshes Wildlife Area

NSMRG MEETING

December 7, 2017

Napa-Sonoma Marshes Wildlife Area Restoration Efforts



Parameters We'll Touch on....

- Rail Surveys
- Water Quality
- Sedimentation Plates and Erosion Pins

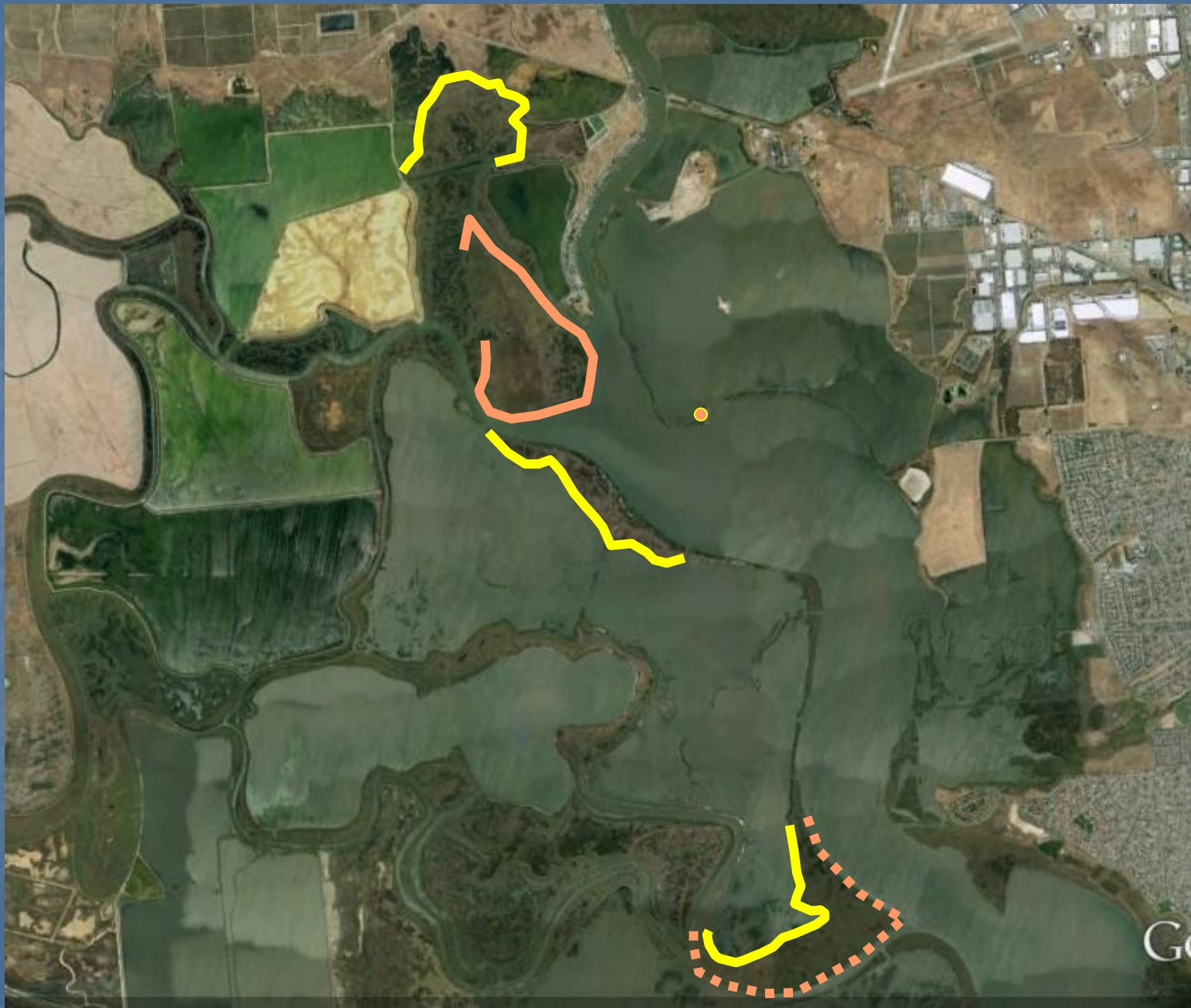


California Ridgway's Rail Surveys

- Sufficient habitat has not yet developed
- no post-restoration detections have been found in the ponds.



Ridgway's Rail Surveys



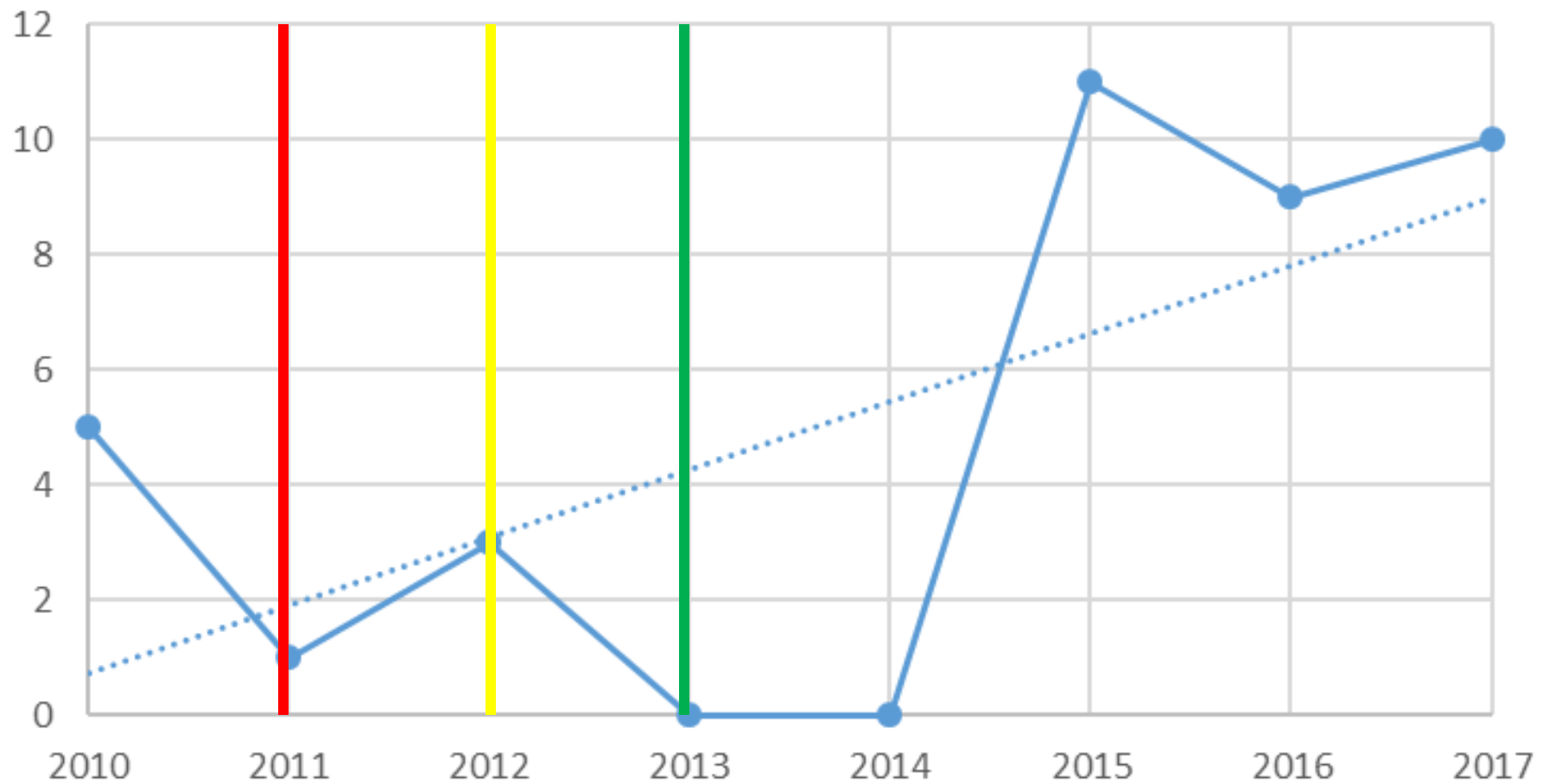


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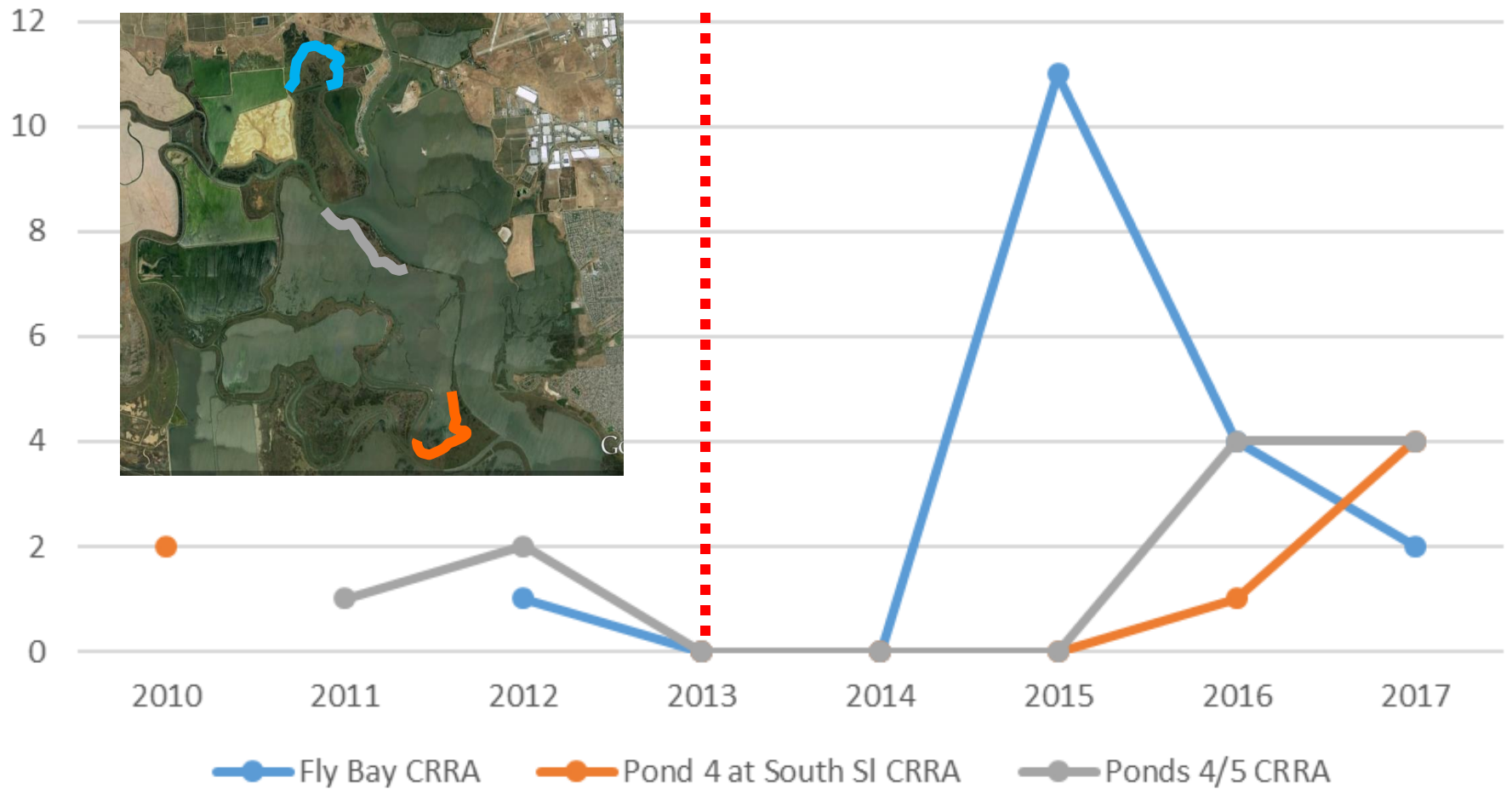
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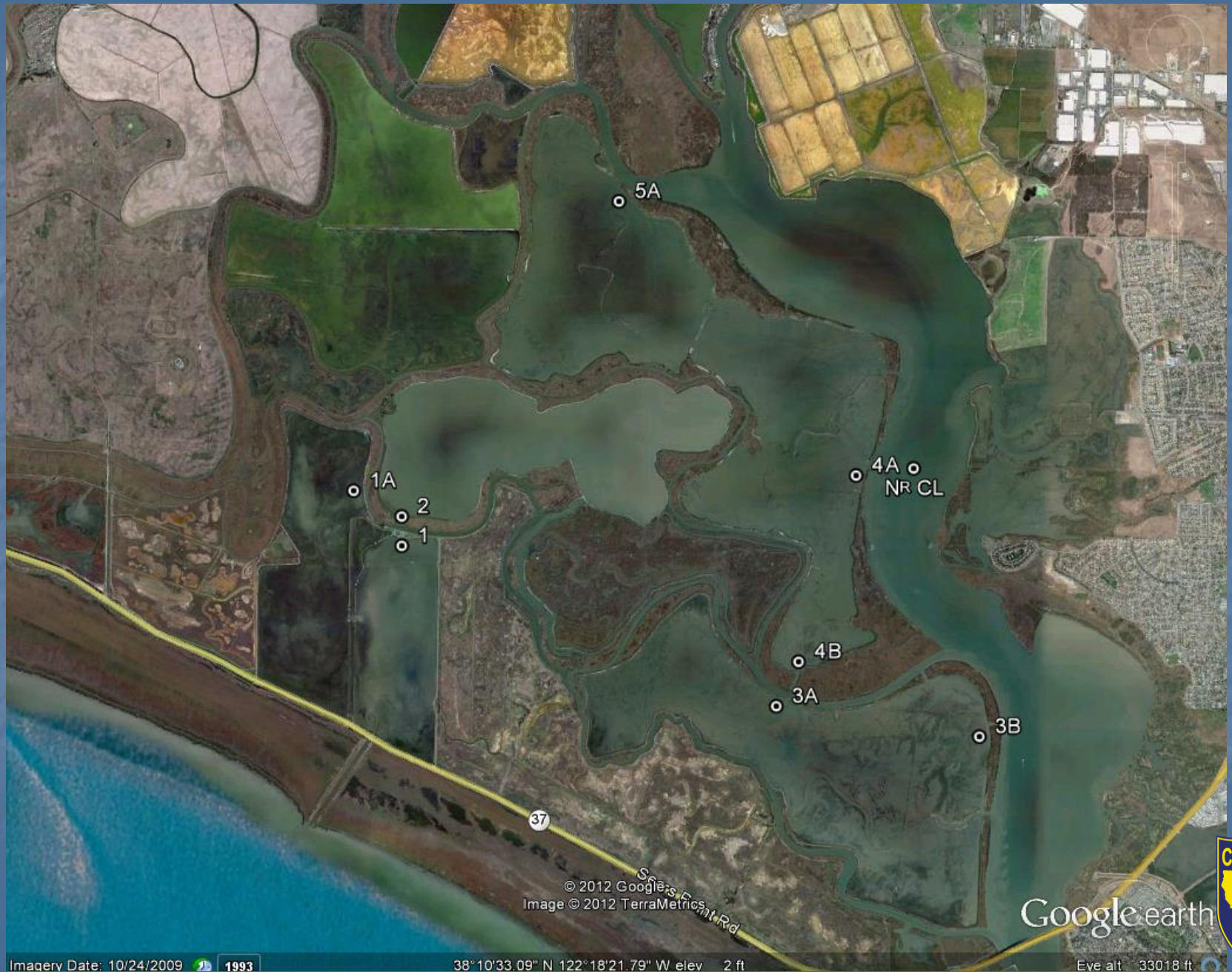
NSMWA Ca Ridgway's Rail Detections



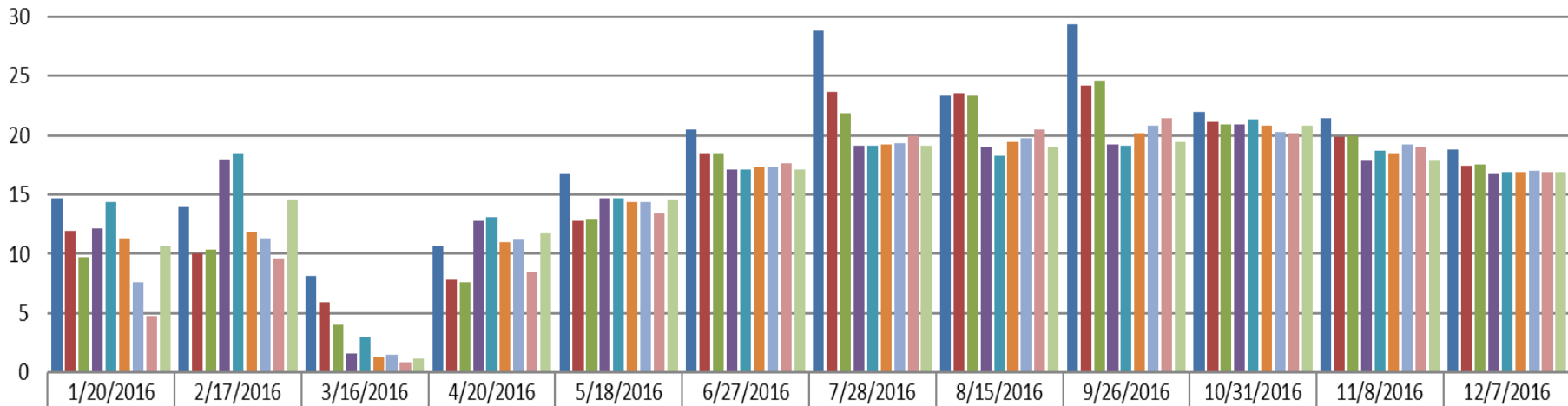
Ridgway's Rail Detection by Location



NSMR Water Quality Sampling Location Map



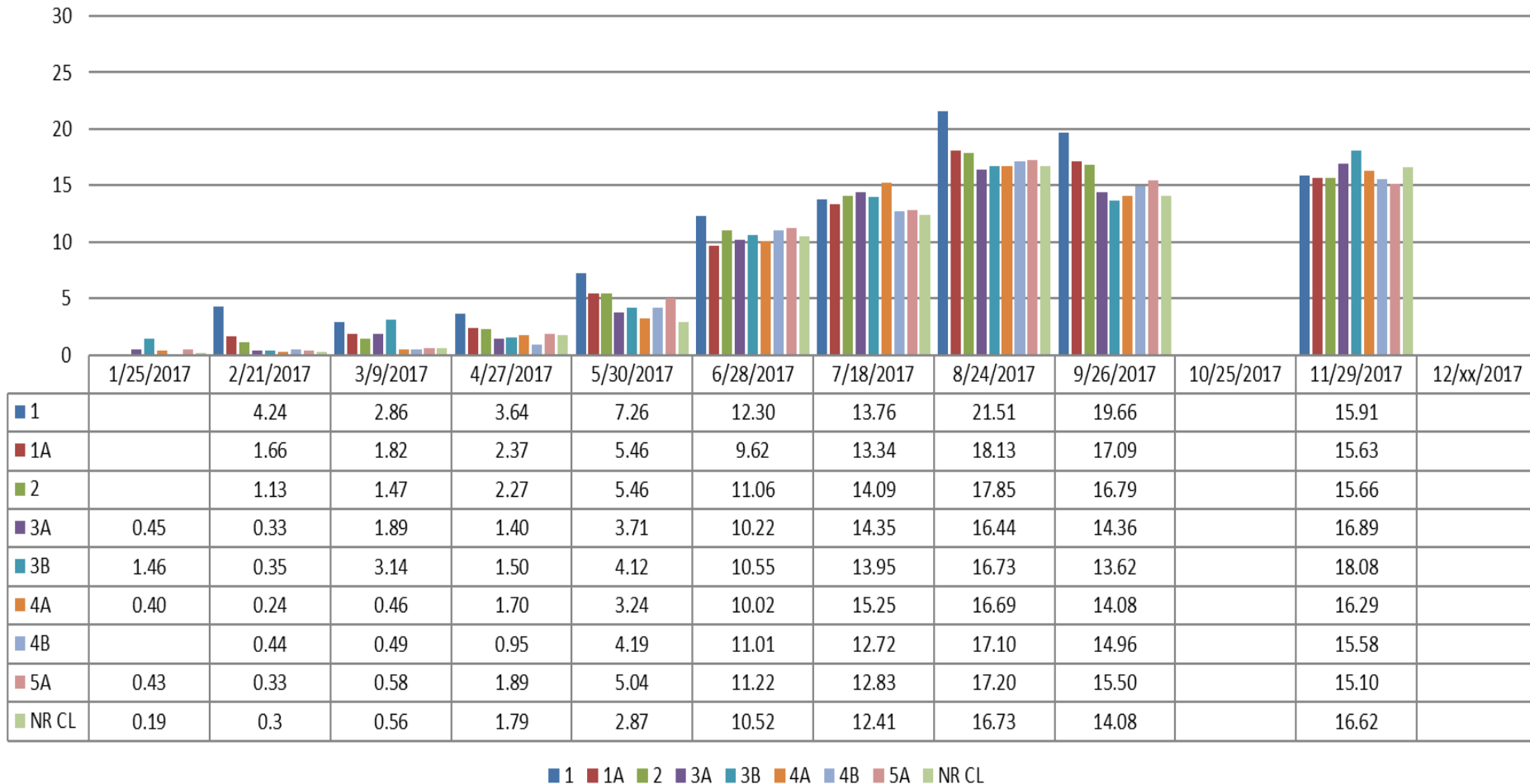
2016 Salinity (ppt) Ponds 1-5 with Napa River



	1/20/2016	2/17/2016	3/16/2016	4/20/2016	5/18/2016	6/27/2016	7/28/2016	8/15/2016	9/26/2016	10/31/2016	11/8/2016	12/7/2016
1	14.63	13.99	8.12	10.62	16.80	20.47	28.78	23.28	29.33	21.90	21.45	18.82
1A	11.91	10.07	5.88	7.85	12.75	18.47	23.64	23.52	24.13	21.07	19.89	17.47
2	9.76	10.33	4.03	7.65	12.87	18.43	21.80	23.27	24.54	20.90	19.92	17.56
3A	12.17	17.98	1.62	12.76	14.72	17.11	19.06	19.05	19.21	20.89	17.79	16.82
3B	14.34	18.49	3.01	13.14	14.69	17.06	19.14	18.22	19.15	21.27	18.73	16.87
4A	11.35	11.82	1.26	10.95	14.31	17.28	19.26	19.37	20.14	20.74	18.46	16.88
4B	7.64	11.27	1.51	11.20	14.36	17.35	19.32	19.70	20.74	20.30	19.16	16.99
5A	4.82	9.6	0.87	8.45	13.41	17.65	20.00	20.43	21.39	20.11	18.99	16.89
NR CL	10.70	14.6	1.14	11.76	14.52	17.11	19.06	18.98	19.46	20.80	17.79	16.93

1 1A 2 3A 3B 4A 4B 5A NR CL

2017 Salinity (ppt) Ponds 1-5 with Napa River



Napa Plant Site Restoration Sedimentation Plate Location Map



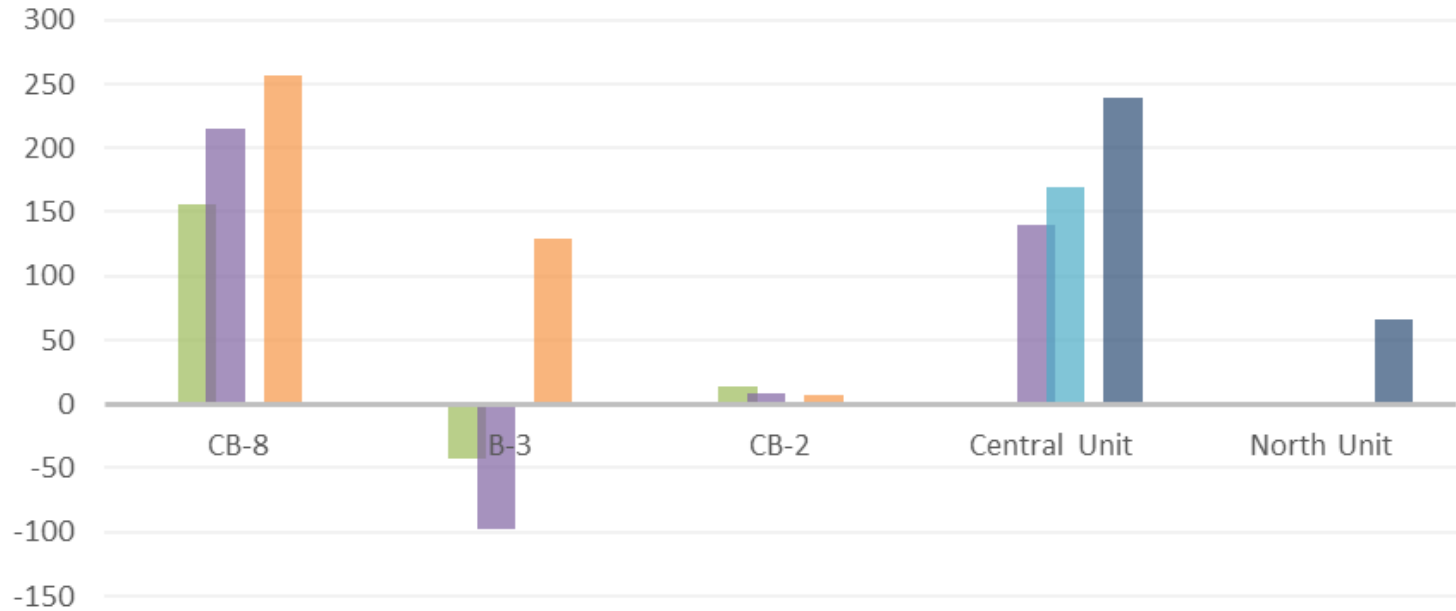
Napa Plant Site Restoration Sediment Plate Locations

▲ -Sedimentation Plate

▲ -Missing Sedimentation Plate



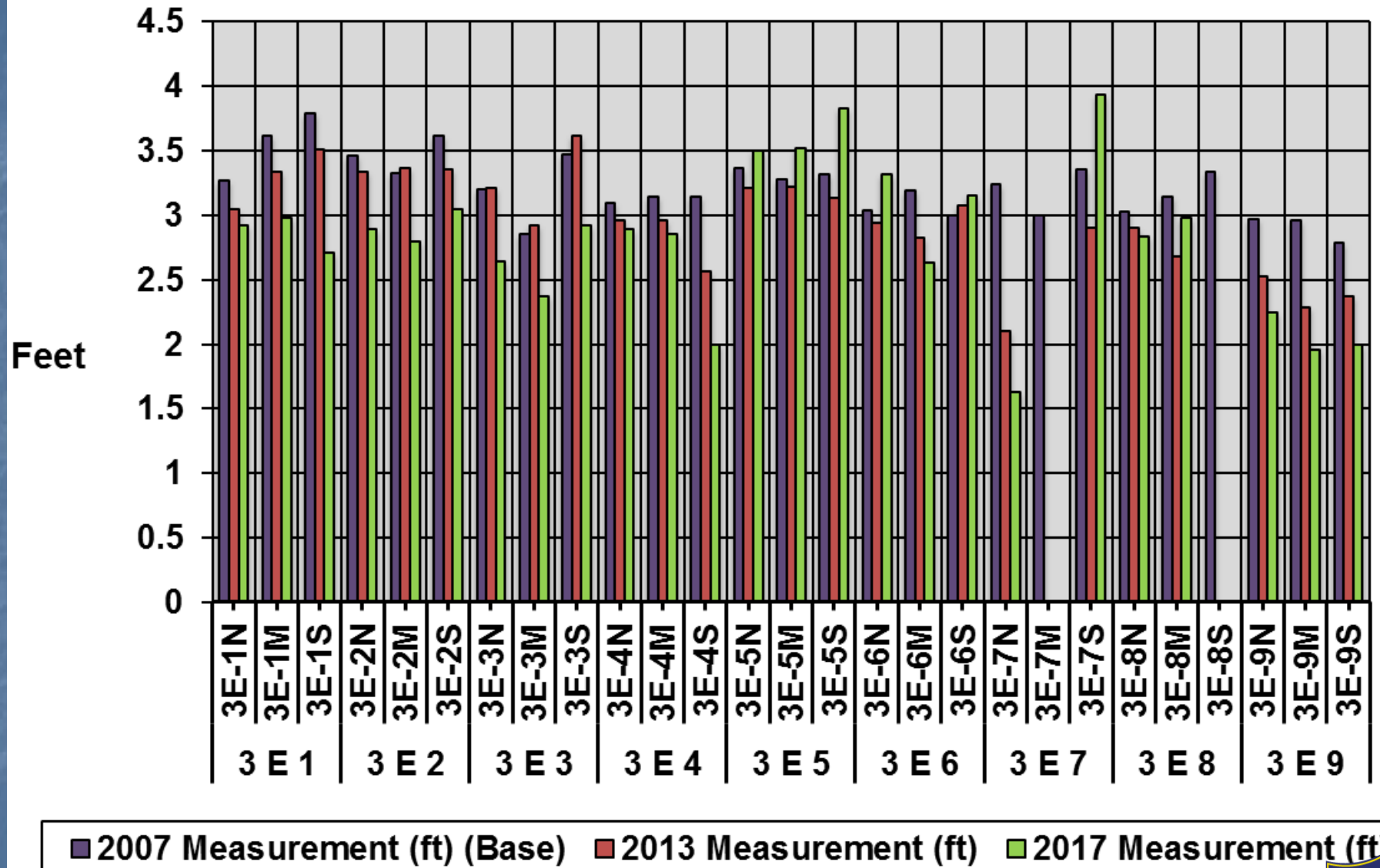
NPS Sedimentation Plates 2009-2017



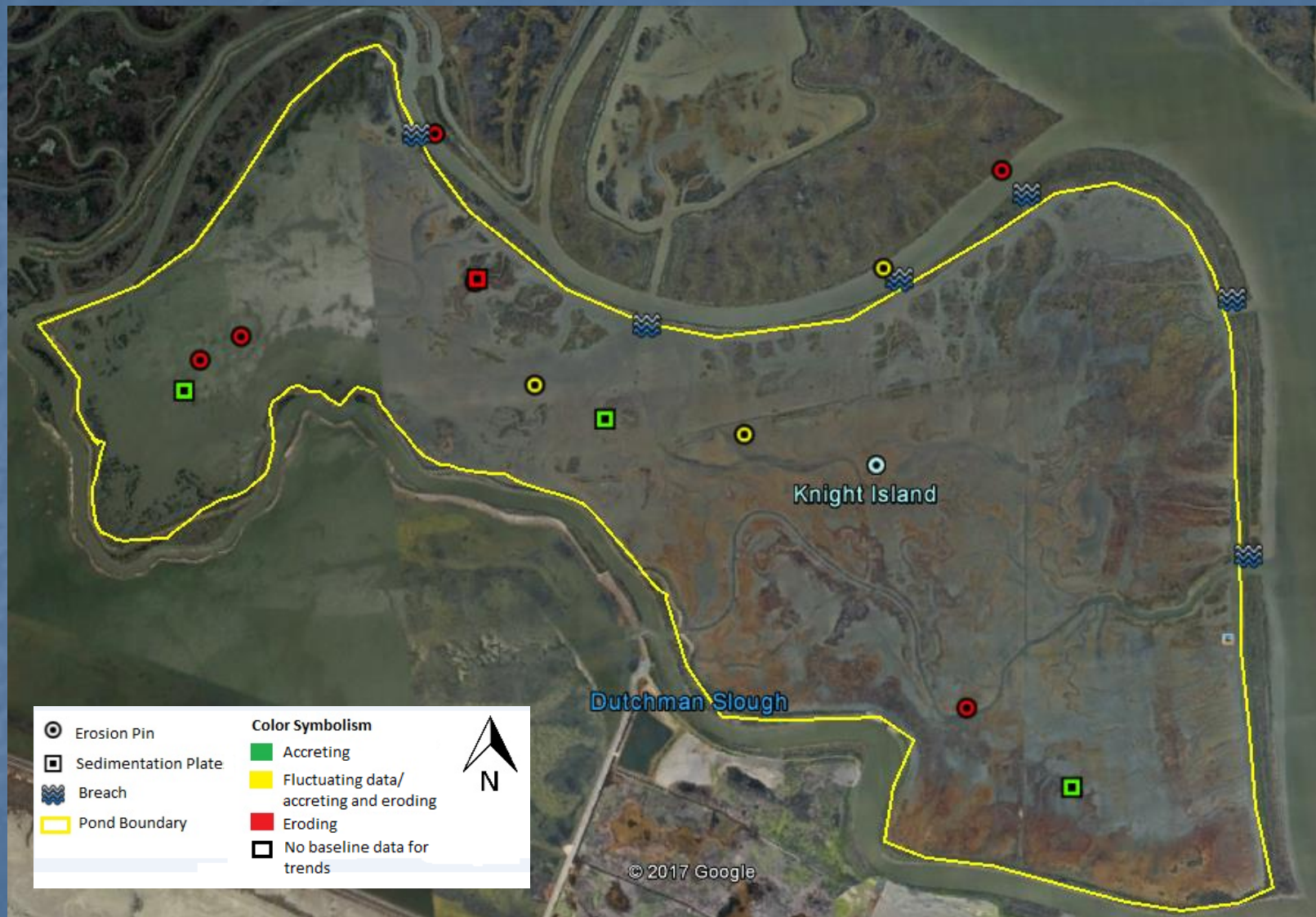
- 2009 Placement Measurement (Base)(mm)
- 2010 Placement Measurement (Base)(mm)
- 2012 Measurement (mm)
- 2013 Measurement (mm)
- 2014 Measurement (mm)
- 2015 Measurement (mm)
- 2016 Measurement (mm)
- 2017 Measurement (mm)



Pond 3



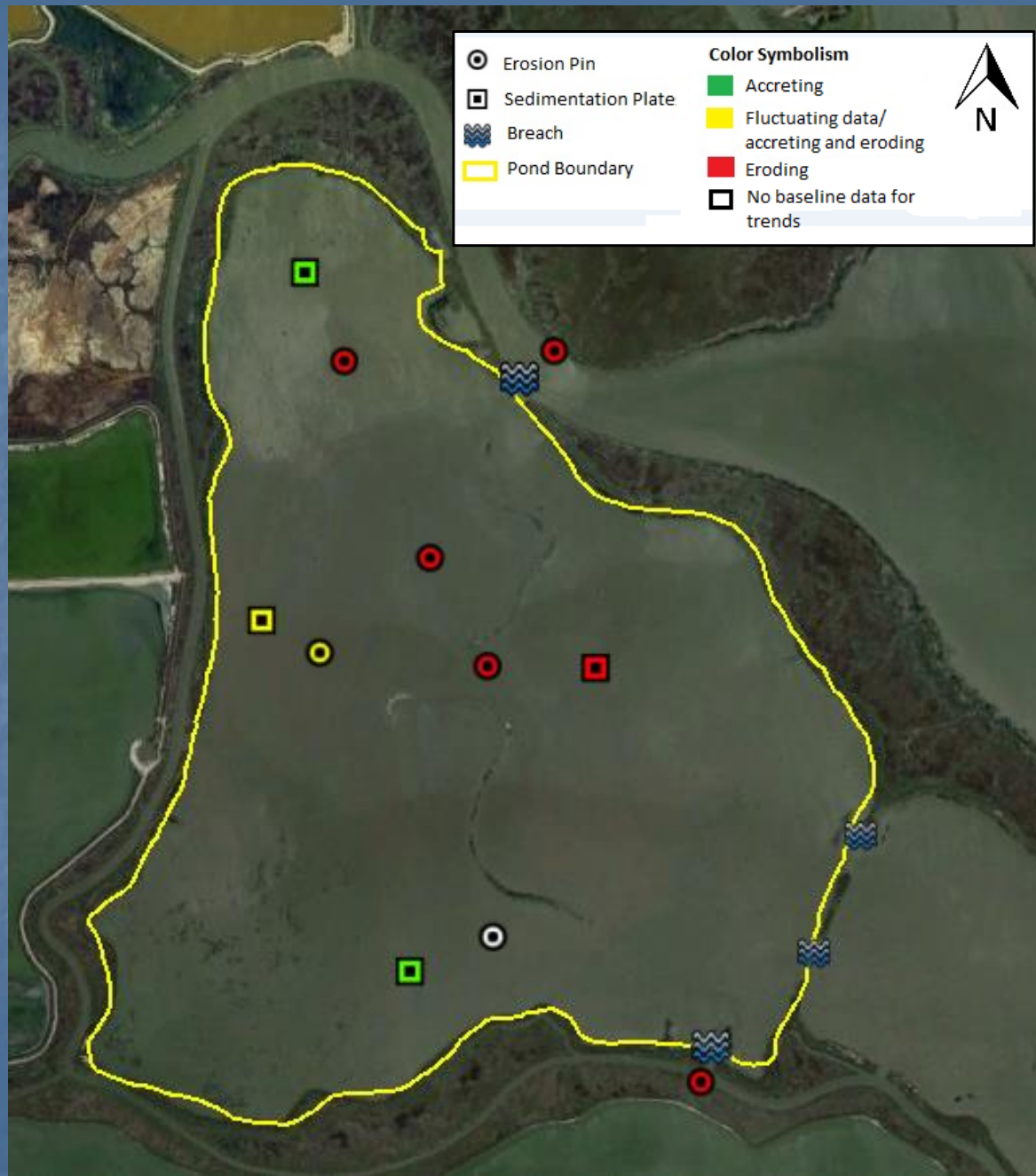
Pond 3 Sedimentation Plate and Erosion Pin Location Map



Pond 4 Sedimentation Plate and Erosion Pin Location Map

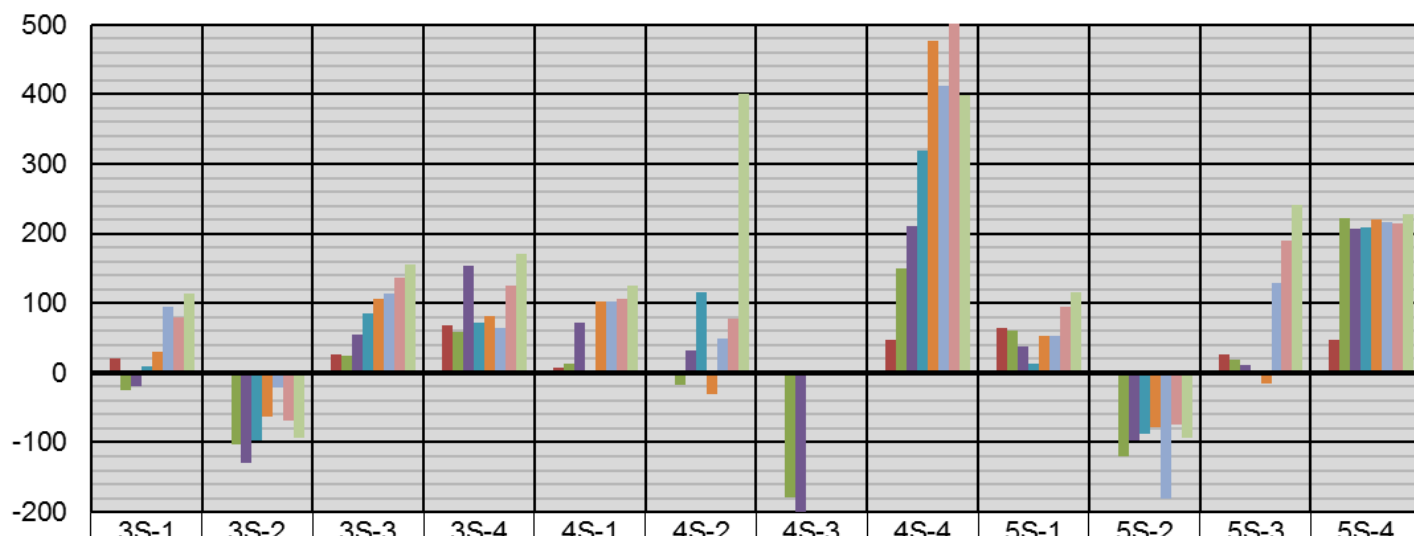


Pond 5 Sedimentation Plate and Erosion Pin Location Map



Sedimentation Plates for NSMWA (Ponds 3-5) 2007-2017

Sedimentation Plate (mm)



	3S-1	3S-2	3S-3	3S-4	4S-1	4S-2	4S-3	4S-4	5S-1	5S-2	5S-3	5S-4
2007 Measurement (mm) (Base)	0	0	0	0	0	0	0	0	0	0	0	0
2008-2009 Measurement (mm)	21.17	0	26.6	69	7.8	0	0	47.25	65.2	0	26.6	47.25
2011 Measurement (mm)	-25.75	-102.25	24.333	57.833	12.5	-17.25	-178.75	150.167	59.7	-120	18.3	221.8
2012 Measurement (mm)	-19.75	-129.25	55.67	153.33	72.17	32.17	-224.00	210.83	37.33	-96.25	11.67	206.83
2013 Measurement (mm)	8.50	-96.5	85	72.33	4.17	116.33	0	318.67	13.83	-87.25	3.50	208.16
2014 Measurement (mm)	31.00	-62.25	107.00	80.67	102.50	-29.75	0	476.67	53.33	-77.75	-16.00	220.83
2015 Measurement (mm)	94.17	-21.00	112.83	64.00	102.5	49.5	0	411.75	53.00	-181.25	128.67	216.17
2016 Measurement (mm)	80.33	-68.00	137.17	124.67	105.5	78.17	0	508.5	95.17	-73.75	190.17	215.17
2017 Measurement (mm)	113.66	-92.75	156.5	170.83	125	400	0	399.33	115.00	-93.75	241.33	227.66

Note: 4S-3 was pulled in 2013 because it had fallen over due to excessive erosion. 4S-2 2017 measurement higher than table. Could not locate.



Central Unit Breach-Napa Plant Site (Green Island Unit) March 2010



September
2017



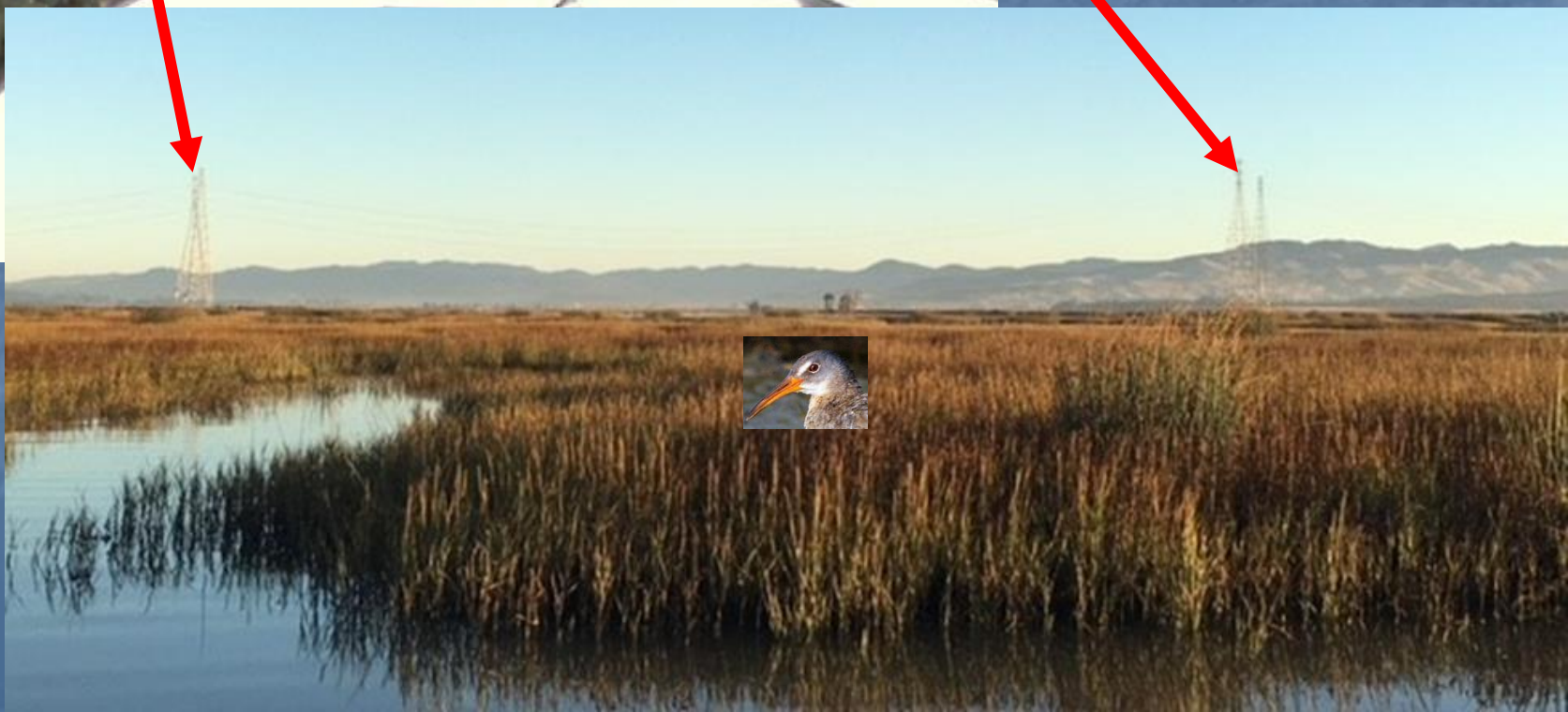
**Pond 3
May 2008**



**September
2017**



**Pond 4
2008**



2017

Hang in there.....



(Don't worry! Rescued Nov 27th by CDFW staff, Tom Huffman and Karen Taylor)

Expect Final 2017 Biennial Report in Spring 2018



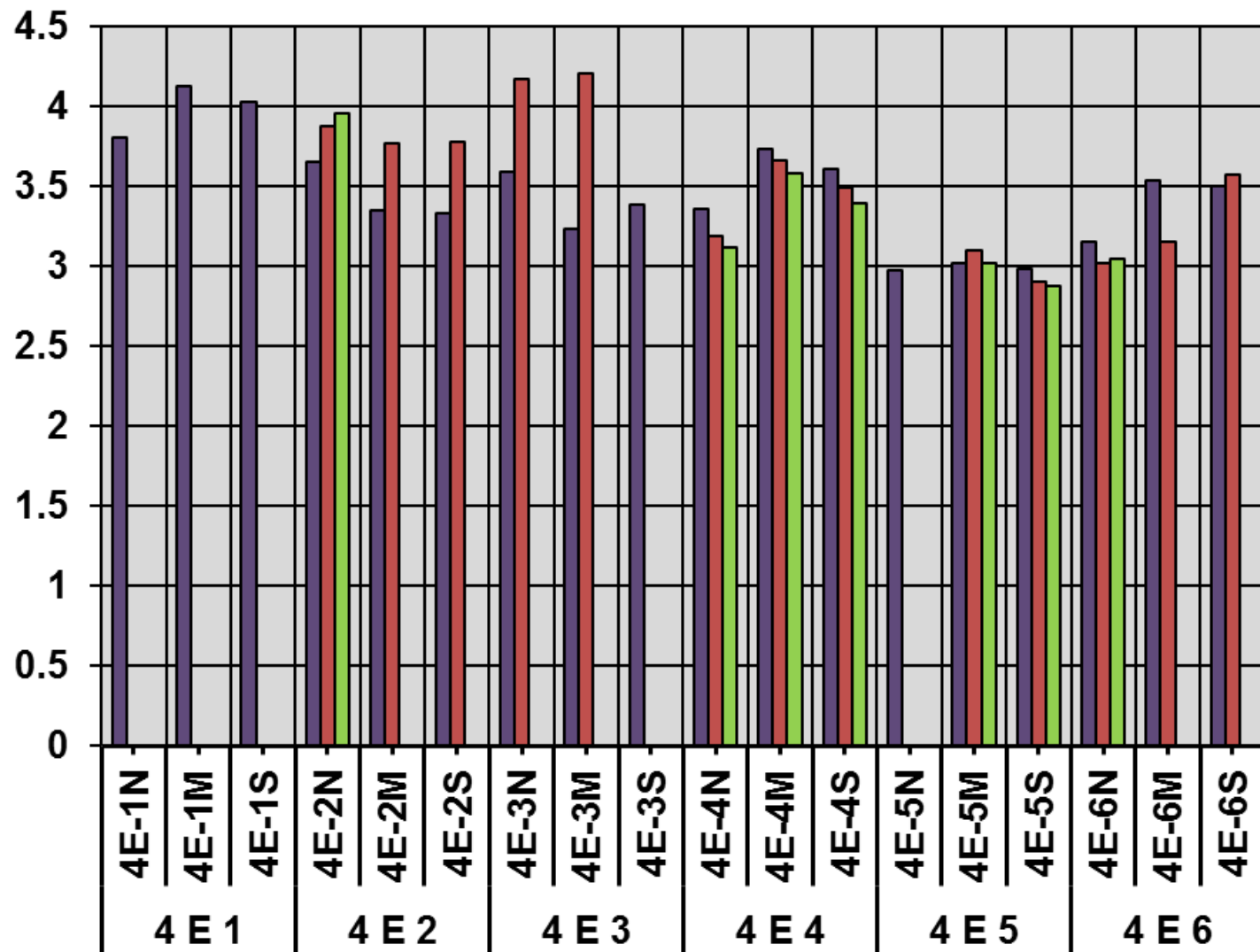
Questions





Pond 4

Feet



■ 2007 Measurement (ft) (Base) ■ 2013 Measurement (ft) ■ 2017 Measurement (ft)



Pond 5

